

14. (New) An etching solution according to claim 1, wherein said water is from 6.4 -20 %
by weight.

REMARKS

Support for the new paragraph containing the brief description of the drawings can be found in the text headers of the original drawings. Claim 1 has been amended to recite features of original claims 2 and 6. Claim 8 has been amended to place the claim in a format more customary with U.S. practice. Support for new claims 9-11 can be found for example, at page 1, line 21-23. Support for new claims 12 and 13 can be found for example, at page 4, line 2. Support for new claim 14 can be found for example at table 2. The objection over claim 3 is respectfully traversed. Claim 3 further characterizes the organic solvent component of claim 1 in a slightly different.

The Rejections Under 35 USC § 112 and 101:

Claims 8 has been rejected under 35 USC § 112, 2nd paragraph and 35 USC § 101. It is believed that amendments to the claims render this rejection moot.

Thus, the rejection under 35 USC § 112 should be withdrawn.

The Rejections Under 35 USC § 102:

Claims 1-4 and 6 were rejected under 35 USC § 102 as being unpatentable over Pushechnikov et al. (SU 628161)

Pushechnikov et al. teaches a composition that includes hydrogen fluoride, ethylene glycol and glycerol. Pushechnikov et al. does not teach compositions comprising 5- 20% by weight hydrofluoric acid.

Thus, the rejection should be withdrawn.

The Rejection Under 35 USC § 102 over Bohac:

Claims 1-3 and 6 were rejected under 35 USC § 102 as being unpatentable over Bohac et al. (CH 664,978).

Bohac teaches a solution having a HF of 1 to 80 %. Bohac however, is not an anticipatory reference. The preferred concentration is 70 % HF. Bohac is absent any specific example or a suggestion of a solution having HF contents in the 5-20 % by weight range. A mere generic disclosure without any specific direction as to the specific element necessary to provide an anticipation is not an anticipatory disclosure. In other words, such a broad generic disclosure does not "describe" an embodiment therein in accordance with 35 U.S.C. §102. See *In re Kollman et al*, 201 USPQ 193 (CCPA 1979). If such a reference were anticipatory, it would not be possible to prove nonobviousness for selection inventions within a generic disclosure. Such is not the state of the law.

Thus, the 35 U.S.C. §102 rejection should be withdrawn. (Incidentally, for the record, the maximum water content of the Bohac mixtures is 8.8 %, not 10.8 %.)

The Rejections Under 35 USC § 103:

Claims 4,5 and 7 were rejected under 35 USC § 103 as being unpatentable over Pushechnikov et al. (SU 628161) and over Bohac et al. (CH 664,978) each alone.

There is no mention in either Bohac or Pushechnikov to make the changes necessary to arrive at the present invention.

For example, Pushechnikov does not suggest the lower HF amounts of the claims. The same is true of Bohac which points out 70 % HF as preferred. Moreover, neither reference teaches how to formulate a selective etching solution where the contents of HF are 5-20 %.

Furthermore, the expression "consisting essentially of" excludes the large amounts of nitrogen containing solvents referenced by Bohac e.g., pyridine, that would clearly "affect the basic novel characteristics of the invention". Nothing motivates a skilled worker to omit such amounts of the nitrogen containing solvents of Bohac.

Thus, all claims are allowable and the rejections should be withdrawn, including all of

the alleged possible rejections over US 3,642,549; US 4,569,722; US 6,316,370; JP 55030826; JP 01125831 and GB 1228083.

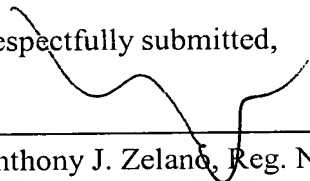
Change of Name documentation

Attached hereto is a copy of the documentation for Change of Name indicating that the inventor originally named Claudia Zielinski has changed her name to Claudia Wiegand. The Report is in German.

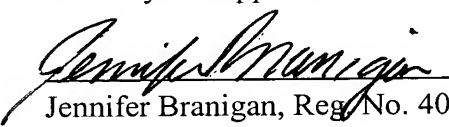
It is submitted that the claims of the application are in condition for allowance. However, should the Examiner have any questions or comments, he is cordially invited to telephone the undersigned at the number below.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "Version With Markings to Show Changes Made".

Respectfully submitted,



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Washington, D.C. 20231 on: 3 Mar 03
Name: [Signature]
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend the specification as follows:

On page 5 delete after line 8 through line 15: ~~Pictures 1 to 3 show SEM photomicrographs of a BSG layer etched by dip etching with spin etch F as comparative solution. An undesired hole which formed in the surface during etching is very clear in photomicrograph 3. Corresponding holes are not found on use of the etching solutions according to the invention.~~

Add the following New Paragraph on page 5 after line 15:

Brief Description of Drawings

Figure 1 depicts the mode of operation of a spin etcher.

Figure 2a depicts vertical measurement values of a wafer profile after etching with spin etch F a spin etcher.

Figure 2b depicts horizontal measurement values of a wafer profile after etching with spin etch F a spin etcher.

Figure 3a depicts vertical measurement values of a wafer profile after etching with ethylene glycol/ HF 15% a spin etcher.

Figure 3b depicts horizontal measurement values of a wafer profile after etching with ethylene glycol/ HF 15% a spin etcher.

Figure 4a depicts vertical measurement values of a wafer profile after etching with ethylene glycol/glycerol/ HF 15% a spin etcher.

Figure 4b depicts horizontal measurement values of a wafer profile after etching with ethylene glycol/glycerol/ HF 15% a spin etcher.

IN THE CLAIMS

Please cancel claims 2, and 6:

Please amend claims 1-8 as follows:

1. (Amended) An etching solution ~~Etching solutions~~ comprising 5- 20% by weight hydrofluoric acid, an organic solvent consisting essentially of, individually or as a mixture ~~selected from the group consisting of~~ ethylene glycol, propylene glycol, ethanol, and glycerol, and 1-20 % by weight water for the production of integrated circuits.

3. An etching solution ~~Etching solutions~~ according to claim 1, comprising only one ~~an~~ organic solvent selected from the group consisting of ethylene glycol, propylene glycol, ethanol, and glycerol.

4.(Amended) An Etching solution ~~solutions~~ according to Claim 1, comprising, as organic solvent, ethylene glycol and glycerol in a mixing ratio of from 1:10 to 10:1.

5.(Amended) An Etching solution ~~solutions~~ according to Claim 1, comprising, as organic solvent, ethylene glycol and glycerol in a mixing ratio of from 1:5 to 5:1.

7. (Amended) An Etching solution ~~solutions~~ according to Claim 1, comprising a mixture of high-purity individual components.

8. (Amended) ~~Use of the A method for the selective etching of doped silicate layers~~
comprising treating said doped silicate layers with an etching ~~solutions~~ solution according to Claim 1 ~~for the selective etching of doped silicate layers~~.

Standesamt

Darmstadt

Bescheinigung über Namensänderung
§ 9a PStV

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Datum der Wirksamkeit

26.07.2001

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Der Standesbeamte

16/682

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Nr. 437

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Darmstadt, den 26. Juli 2001

Der Standesbeamte

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